IN THE CLAIMS

Please cancel Claims 1-20 of the originally filed claims. With entry of the present amendment, the claims of the present application are as follows:

Claims 1-20. (Canceled).

21. (Original) Receiving apparatus wherein a transport channel bit-stream (TCBS), which contains a first digitized television IF signal represented by transport samples composed of at least a N-C-bits compressed transport sample (CTS) and a (M-N)-bits residual transport sample (RTS) and which is either obtained through compression or is transmitted, is transformed into a second digitized television IF signal, comprising:

an input for the transport channel bit-stream (TCBS).

a decoder DPCM-core (D2) for decompressing the N-C bits of a compressed transport sample (CTS) to N MSB's of an output sample (S2),

a combiner (CB) for combining the M-N LSB's and N MSB's of a sample to an output sample (S2).

a second location clipping detector (BSC2) which generates a second location PCM-bit substitution control signal (SC2), indicating what is to be selected as M-N least significant bits of the output sample (S2), and a sign signal (SGN), being the sign bit of the transmitted transformed clipping error,

a second location substitutor (BS2) which switches between the received M-N LSB's from the residual transport sample (RTS) and a replacement according to the second location PCM-bit substitution control signal (SC2), and

an MSB corrector (COR) which adds to or subtracts from the result of adder ADD21 in the decoder DPCM-core (D2) and the output value of mapping the received transport sample (RTS) by means of a second function, according to the second location PCM-bit substitution control signal (SC2) and the sign signal (SGN).

22. (Original) Receiving apparatus according to Claim 21 further comprising:

a prediction mapper (PM2) for generating a mapped prediction (m($\hat{x}_{dec}$)) from a decoder prediction $\hat{x}_{dec}$) from the decoder DPCN-core (D2), whereby the prediction mapper (PM2) comprises means for one or a uniform mapping and a non-uniform mapping, and

a subtractor (SUB21) which subtracts the mapped prediction (m($\hat{x}_{dec}$)) from the sample of the compressed transport stream (CTS) and which then does a wrap-around of the result of the subtraction, obtaining to a clipped prediction error $((e_{dec})_c)$.

23. (Original) Receiving apparatus wherein a transport channel bit-stream (TCBS), containing a first digitized television IF signal represented by transport samples composed of at least a (N-C)-bits compressed transport sample (CTS) and either being compressed or transmitted, is transformed into a second digitized television IF signal, comprising.

an input for the transport channel bit-stream (TCBS),

a decoder CPCM-core (D2) for decompressing the N-C bits of a compressed transport sample (CTS) to N bits of an output sample (S2),

a prediction mapper (PM2) for generating a mapped prediction (m($\hat{x}_{dec}$)) from a decoder prediction ($\hat{x}_{dec}$) from the decoder DPCM-core (D2), whereby the prediction mapper (PM2) comprises means for one of a uniform mapping and a non-uniform mapping, and

a subtractor (SUB21) which subtracts the mapped prediction ($m(\hat{x}_{dec})$) from the sample of the compressed transport stream (CTS) and which then does a wrap-around of the result of the subtraction, obtaining so a clipped prediction error ($(e_{dec})_c$).

24. (Original) Receiving apparatus according to Claim 21 further comprising:

a phase-locked loop (PLL2) which estimates a phase (Φ_{dec}) of the IF carrier based on a decoded television IF signal ($\tilde{x}_{dec}$) from the decoder DPCM-core (D2),

a luminance estimator (LUE2) which estimates the luminance of the video signal contained in the television IF signal based on the decoded television IF signal ($\tilde{x}_{dec}$) and on the said estimated phase (Φ_{dec}) of the IF carrier, resulting in an estimated luminance (L_{dec}), and

a shift estimator (SHE2) which estimates the amount of shift (sh_{dec}) based on the said estimated phase (Φ_{dec}) of the IF carrier and on the said estimated luminance (L_{dec}), and

wherein said decoder CPCM-core (D2) comprises means to decode prediction errors which have been clipped in the encoder at the corresponding transmitting apparatus to a clip range which has been shifted there by an amount indicated by a shift estimator (SHE1).

25. (Original) Receiving apparatus wherein a transport channel bit-stream (TCBS), containing a first digitized television IF signal represented by transport samples composed of at least a (N-C)-bits compressed transport sample (CTS) and either being compressed or transmitted, is transformed into a second digitized television IF signal, comprising,

an input for the transport channel bit-stream (TCBS),

a decoder DPCM-core (D2) for decompressing the N-C bits of a sample of the compressed transport stream (CTS) to N bits of an output sample (S2),

a phase-locked loop (FLL2) which estimates a phase (Φ_{dec}) of the IF carrier based on a decoded television IF signal ($\tilde{x}_{dec}$) from the decoder DPCM-core (D2),

a luminance estimator (LUE2) which estimates the luminance of the video signal contained in the television IF signal based on the decoded television IF signal ($\tilde{x}_{dec}$) and on the said estimated phase (Φ_{dec}) of the IF carrier, resulting in an estimated luminance (L_{dec}), and

a shift estimator (SHE2) which estimates the amount of shift (sh_{dec}) based on the said estimated phase (Φ_{dec}) of the IF carrier and on the said estimated luminance (L_{dec}),

wherein said decoder CPCM-core (D2) comprises means to decode prediction errors which have been clipped in the encoder at the corresponding transmitting apparatus to a clip range which has been shifted there by an amount indicated by a shift estimator (SHE1).

26. (Original) Receiving apparatus according to Claim 25, further comprising:

a prediction mapper (PM2) for generating a mapped value ($m(y)$) from the decoder prediction $y = \hat{x}_{dec}$ or the sum $y = \hat{x}_{dec} + sh$ of decoder prediction $\hat{x}_{dec}$ from the decoder CPCM-core (D2) and the shift amount sh, whereby the prediction mapper (PM2) comprises means for one of a uniform mapping and a non-uniform mapping, and

a subtractor (SUB21) which subtracts the mapped value ($m(y)$) from the sample of the compressed transport stream (CTS) and which then does a wrap-around of the result of the subtraction, obtaining so a clipped prediction error ($(e_{dec})_c$).

27. (Original) Receiving apparatus according to Claim 24, further comprising:

a prediction mapper (PM2) for generating a mapped value ($m(y)$) from one of the decoder prediction $y = \hat{x}_{dec}$ and the sum $y = \hat{x}_{dec} + sh$ of decoder prediction $\hat{x}_{dec}$ from the decoder CPCM-core (D2) and the shift amount sh, whereby the prediction mapper (PM2) comprises means for one of a uniform mapping and a non-uniform mapping, and

a subtractor (SUB21) which subtracts the mapped value ($m(y)$) from the sample of the compressed transport stream (CTS) and which then does a wrap-around of the result of the subtraction, obtaining so a clipped prediction error ($(e_{dec})_c$).